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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,122	11/20/2000	Teuvo Olavi Venalainen	991.1145	5980
21831	7590	06/28/2004	EXAMINER	
STEINBERG & RASKIN, P.C. 1140 AVENUE OF THE AMERICAS, 15th FLOOR NEW YORK, NY 10036-5803			REIS, TRAVIS M	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,122

Applicant(s)

VENALAINEN, TEUVO OLAVI

Examiner

Travis M Reis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, & 6-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chisum (U.S. Patent 5341575) in view of Ham (U.S. Patent 5343628), Venalainen (U.S. Patent 5634368), & Wiedmann et al. (U.S. Patent 5848477).

With reference to claims 1, 6, 8, 9, 11-16, & 18, Chisum discloses a measurement apparatus and method for vehicle body alignment work comprising an alignment table (22) to whose fastenings (38, 40) a vehicle (42) is attached for the time of the alignment work and a measurement unit (36) of which measurement apparatus (194) can be moved in a vertical guide (154), which vertical guide can be further moved in a longitudinal guide (24) and which measurement unit is provided with a movable measurement arm (154) (Figures 3 & 8).

Chisum does not disclose a measurement arm with an articulation, the articulation at the end of the measurement arm comprises a sleeve part, a backing body being pivotable, via pivot with respect to the sleeve part to alternative angular positions, and that the arm part associated with the backing body can be turned in a horizontal plane with respect to the measurement arm; to which a first arm part is connected such that the first arm part is pivoted on support of the articulation with respect to the measurement arm, and that to the first arm part is connected a second arm part to which second arm part; the first arm part further comprises end threads at its end, onto which threads a nut is mounted, so that by means of a tension sleeve situated between the nut and the second arm part can be locked to different

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positions with respect to the first arm part, the tension sleeve being split in a longitudinal direction, thereby serving as a tension washer when the nut tightens it against the arm part, the thread being a taper thread; a measurement head, with a groove on a surface of said measurement head, is connected through an end piece having a measurement through hole formed therein for receiving said measurement head therein, said end piece comprising a stub projecting axially & perpendicularly out from said second end of said second arm part, a second structure formed by the first and second arm parts which can be extended in the direction of a longitudinal axis of the first arm part such that the second arm part can be displaced with respect to the first arm part to different length positions; wherein the second arm part comprises a through hole formed at an end thereof through which the measurement head is passed.

Ham discloses a vehicle repair measurement device with the articulation at the end of the measurement arm comprises a sleeve part (92), a backing body (32) being pivotable, via pivot (34) with respect to the sleeve part to alternative angular positions, and that the arm part associated with the backing body (48) can be turned in a horizontal plane with respect to the measurement arm (40); to which a first arm part (90) is connected such that the first arm part is pivoted on support of the articulation with respect to the measurement arm, and that to the first arm part is connected a second arm part (100) to which second arm part; the first arm part further comprises end threads at its end, onto which threads a nut (102) is mounted, so that by means of a tension sleeve (95) situated between the nut (59) and the second arm part can be locked to different positions with respect to the first arm part, the tension sleeve being split in a longitudinal direction, thereby serving as a tension washer when the nut tightens it against the arm part, the thread being a taper thread; a measurement head (106), with a groove (126) on a surface of said measurement head, is connected through an end

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piece (104) having a measurement through hole formed therein for receiving said measurement head therein, said end piece comprising a stub projecting axially & perpendicularly out from said second end of said second arm part, a second structure (2) formed by the first and second arm parts which can be extended in the direction of a longitudinal axis of the first arm part such that the second arm part can be displaced with respect to the first arm part to different length positions; wherein the second arm part comprises a through hole formed at an end thereof through which the measurement head is passed (Figures 1-3 & 5) for contacting various points along the vehicle body (col. 4 lines 31-32). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the articulated arm disclosed by Ham to the alignment table disclosed by Ham in order that the measurement apparatus can contact various parts along the vehicle body.

Ham & Chisum do not disclose the second arm part can turn on its longitudinal axis.

Venalainen discloses a device and method for alignment of an automobile body with an arm (17) capable of rotating around (L2) its longitudinal axis (L1) due to the rounded arm (Figure 4A), granting the arm an ability to set into a desired angle (col. 5 lines 39-41).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to shape the arms disclosed by Ham in a rounded manner as taught by Venalainen in order to provide the measurement head the ability of being set into any desired angle.

Chisum, Ham, and Venalainen do not disclose any arm part or the measurement head being connected to either the articulation or other arm part via connection assemblies comprising a ball-hole joint, said ball-hole joint comprising a plurality of spaced holes, each of the holes corresponding to a selected angular or rotary position and ball and spring means

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for receipt within said a selected one of said plurality of holes for locking said arms in selected angular and rotary positions and locked in said positions.

Wiedmann et al. disclose a coordinate measuring apparatus (1) having a spatially adjusted probe pin (19) using a ball (31) and spring (30) assembly in a plurality of spaced holes (22) to allow the pin to be adjustable via a ball-hole joint into a plurality of angular and rotary positions (Figure 5). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the ball and spring assembly and plurality of spaced holes to the connections of the arm parts disclosed by Chisum, Ham, and Venalainen in order that the arm parts may be secured when placed in a suitable position.

With reference to claim 10, Chisum discloses the step of reading and feeding and/or transmitting the vertical, horizontal, and longitudinal coordinate information of the arm into the memory of a computer for displaying and/or printing the aforesaid vertical, horizontal, and longitudinal coordinates, and/or other measurement/alignment positional data of the arm (col. 2 lines 65-68 through col. 3 lines 1-4).

With reference to claims 7 & 17, Chisum, Ham, Venalainen, & Wiedmann et al. do not disclose the second arm part end sleeve is made of plastic, or said sleeve is attached by means of a cotter to a metal portion of the second arm part.

With regards to the plastic end sleeve: the particular type of material used to make the end sleeve, absent any criticality, is only considered to be the use of a " preferred " or " optimum " material out of a plurality of well known materials that a person having ordinary skill in the art at the time the invention was made would have find obvious to provide using routine experimentation based, among other things, on the intended use of Applicant's apparatus, i.e., suitability for the intended use of Applicant's apparatus, and since the courts have stated that a selection of a material on the basis of suitability for intended use of an

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apparatus would be entirely obvious. See In re Leshin, 125 USPQ 416 (CCPA 1960).

With regards to the cotter: the attachment means claimed by Applicant and the attachment means (i.e. a nut 102) used by Chisum, Ham, Venalainen, & Wiedmann et al. are well known alternate types of attachment means which will perform the same function, if one is replaced with the other, of connecting the two arm parts in a bearing arrangement. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to replace the nut disclosed by Chisum, Ham, Venalainen, & Wiedmann et al. with a cotter since they are alternative attachment means.

Response to Arguments

3. In response to applicant's arguments that the prior art does not disclose a ball-hole joint to provide different angular positions; these arguments have been fully considered but they are not persuasive since Wiedmann et al. discloses said feature would be an obvious combination, as detailed above in paragraph 2.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis M Reis whose telephone number is (571) 272-2249. The examiner can normally be reached on 8--5 M--F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Travis M Reis
Examiner
Art Unit 2859



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800

tmr
June 24, 2004

CHRISTOPHER W. FULTON
PRIMARY EXAMINER